

SEQUENCE LISTING

<110> SOLVAY PHARMACEUTICALS GmbH

<120> Compounds With NEP/MP-Inhibitory Activity
and Uses Thereof

<130> HA 00.17-WO

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<170> PatentIn Ver. 2.1

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<211> 2076

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<213> Homo sapiens

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Ser Ile Phe Asp Val Leu Arg Asp Glu Leu Glu Val Ile Leu Lys Ala	
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Val Ala Met Asp Arg Trp Asn Glu Thr Val Gly Leu Glu Trp Glu Leu	
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Glu Ala Gln Glu Val Ser Glu Val Cys Thr Thr Pro Gly Cys Val Ile	
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Ala Ala Ala Arg Ile Leu Gln Asn Met Asp Pro Thr Thr Glu Pro Cys	
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ctg	aac	ttc	tca	gag	gac	ctg	tac	ttt	gag	aac	agt	ctg	cag	aac	ctc	1632				
Leu	Asn	Phe	Ser	Glu	Asp	Leu	Tyr	Phe	Glu	Asn	Ser	Leu	Gln	Asn	Leu					
			530				535						540							
aag	gtg	ggc	gcc	cag	cgg	agc	ctc	agg	aag	ctt	cgg	gaa	aag	gtg	gac	1680				
Lys	Val	Gly	Ala	Gln	Arg	Ser	Leu	Arg	Lys	Leu	Arg	Glu	Lys	Val	Asp					
			545				550						560							
cca	aat	ctc	tgg	atc	atc	ggg	gcg	gcg	gtg	gtc	aat	gcg	ttc	tac	tcc	1728				
Pro	Asn	Leu	Trp	Ile	Ile	Gly	Ala	Ala	Val	Val	Asn	Ala	Phe	Tyr	Ser					
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cca	aac	cga	aac	cag	att	gta	ttc	cct	gcc	ggg	atc	ctc	cag	ccc	ccc	1776				
Pro	Asn	Arg	Asn	Gln	Ile	Val	Phe	Pro	Ala	Gly	Ile	Leu	Gln	Pro	Pro					
			580				585						590							
ttc	ttc	agc	aag	gag	cag	cca	cag	gcc	ttg	aac	ttt	gga	ggc	att	ggg	1824				
Phe	Phe	Ser	Lys	Glu	Gln	Pro	Gln	Ala	Leu	Asn	Phe	Gly	Gly	Ile	Gly					
			595				600						605							
atg	gtg	atc	ggg	cac	gag	atc	acg	cac	ggc	ttt	gac	gac	aat	ggc	cgg	1872				
Met	Val	Ile	Gly	His	Glu	Ile	Thr	His	Gly	Phe	Asp	Asp	Asn	Gly	Arg					
			610				615						620							
aac	ttc	gac	aag	aat	ggc	aac	atg	atg	gat	tgg	tgg	agt	aac	ttc	tcc	1920				
Asn	Phe	Asp	Lys	Asn	Gly	Asn	Met	Met	Asp	Trp	Trp	Ser	Asn	Phe	Ser					
			625				630						640							

acc cag cac ttc cgg gag cag tca gag tgc atg atc tac cag tac ggc	1968
Thr Gln His Phe Arg Glu Gln Ser Glu Cys Met Ile Tyr Gln Tyr Gly	
645 650 655	
aac tac tcc tgg gac ctg gca gac gaa cag aac gtg aac gga ttc aac	2016
Asn Tyr Ser Trp Asp Leu Ala Asp Glu Gln Asn Val Asn Gly Phe Asn	
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Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly Gly Val Arg Gln Ala Tyr	
675 680 685	
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Lys Ala Tyr Leu Lys Trp Met Ala Glu Gly Gly Lys Asp Gln Gln Leu	
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Pro Gly Leu Asp Leu Thr His Glu Gln Leu Phe Phe Ile Asn Tyr Ala	
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cag gtg tgg tgc ggg tcc tac cgg ccc gag ttc gcc atc caa tcc atc	2208
Gln Val Trp Cys Gly Ser Tyr Arg Pro Glu Phe Ala Ile Gln Ser Ile	
725 730 735	
aag aca gac gtc cac agt ccc ctg aag tac agg gta ctg ggg tcg ctg	2256
Lys Thr Asp Val His Ser Pro Leu Lys Tyr Arg Val Leu Gly Ser Leu	
740 745 750	
cag aac ctg gcc gcc ttc gca gac acg ttc cac tgt gcc cgg ggc acc	2304
Gln Asn Leu Ala Ala Phe Ala Asp Thr Phe His Cys Ala Arg Gly Thr	
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ccc atg cac ccc aag gag cga tgc cgc gtg tgg tag	2340
Pro Met His Pro Lys Glu Arg Cys Arg Val Trp	
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 35 40 45
 Asp Arg Arg Gly Lys Gln Leu Pro Arg Leu Ala Ser Arg Leu Cys Phe
 50 55 60
 Leu Gln Glu Glu Arg Thr Phe Val Lys Arg Lys Pro Arg Gly Ile Pro

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Ala	Ala	Ala	Arg	Ile	Leu	Gln	Asn	Met	Asp	Pro	Thr	Thr	Glu	Pro	Cys
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Asp	Asp	Phe	Tyr	Gln	Phe	Ala	Cys	Gly	Gly	Trp	Leu	Arg	Arg	His	Val
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Ile	Pro	Glu	Thr	Asn	Ser	Arg	Tyr	Ser	Ile	Phe	Asp	Val	Leu	Arg	Asp
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Glu	Leu	Glu	Val	Ile	Leu	Lys	Ala	Val	Leu	Glu	Asn	Ser	Thr	Ala	Lys
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Asp	Arg	Pro	Ala	Val	Glu	Lys	Ala	Arg	Thr	Leu	Tyr	Arg	Ser	Cys	Met
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Leu	Glu	Val	Val	Gly	Gly	Trp	Pro	Val	Ala	Met	Asp	Arg	Trp	Asn	Glu
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Thr	Val	Gly	Leu	Glu	Trp	Glu	Leu	Glu	Arg	Gln	Leu	Ala	Leu	Met	Asn
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Ser	Gln	Phe	Asn	Arg	Arg	Val	Leu	Ile	Asp	Leu	Phe	Ile	Trp	Asn	Asp
225				230					235						240
Asp	Gln	Asn	Ser	Ser	Arg	His	Ile	Ile	Tyr	Ile	Asp	Gln	Pro	Thr	Leu
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Gly	Met	Pro	Ser	Arg	Glu	Tyr	Tyr	Phe	Asn	Gly	Gly	Ser	Asn	Arg	Lys
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Val	Arg	Glu	Ala	Tyr	Leu	Gln	Phe	Met	Val	Ser	Val	Ala	Thr	Leu	Leu
		275					280					285			
Arg	Glu	Asp	Ala	Asn	Leu	Pro	Arg	Asp	Ser	Cys	Leu	Val	Gln	Glu	Asp
	290					295					300				
Met	Met	Gln	Val	Leu	Glu	Leu	Glu	Thr	Gln	Leu	Ala	Lys	Ala	Thr	Val
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Pro	Gln	Glu	Glu	Arg	His	Asp	Val	Ile	Ala	Leu	Tyr	His	Arg	Met	Gly
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Leu	Glu	Glu	Leu	Gln	Ser	Gln	Phe	Gly	Leu	Lys	Gly	Phe	Asn	Trp	Thr
			340					345					350		
Leu	Phe	Ile	Gln	Thr	Val	Leu	Ser	Ser	Val	Lys	Ile	Lys	Leu	Leu	Pro
		355					360					365			
Asp	Glu	Glu	Val	Val	Val	Tyr	Gly	Ile	Pro	Tyr	Leu	Gln	Asn	Leu	Glu

370															
Asn	Ile	Ile	Asp	Thr	Tyr	Ser	Ala	Arg	Thr	Ile	Gln	Asn	Tyr	Leu	Val
385					390					395					400
Trp	Arg	Leu	Val	Leu	Asp	Arg	Ile	Gly	Ser	Leu	Ser	Gln	Arg	Phe	Lys
				405					410					415	
Asp	Thr	Arg	Val	Asn	Tyr	Arg	Lys	Ala	Leu	Phe	Gly	Thr	Met	Val	Glu
			420					425					430		
Glu	Val	Arg	Trp	Arg	Glu	Cys	Val	Gly	Tyr	Val	Asn	Ser	Asn	Met	Glu
		435					440					445			
Asn	Ala	Val	Gly	Ser	Leu	Tyr	Val	Arg	Glu	Ala	Phe	Pro	Gly	Asp	Ser
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Lys	Ser	Met	Val	Arg	Glu	Leu	Ile	Asp	Lys	Val	Arg	Thr	Val	Phe	Val
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Glu	Thr	Leu	Asp	Glu	Leu	Gly	Trp	Met	Asp	Glu	Glu	Ser	Lys	Lys	Lys
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Ala	Gln	Glu	Lys	Ala	Met	Ser	Ile	Arg	Glu	Gln	Ile	Gly	His	Pro	Asp
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Tyr	Ile	Leu	Glu	Glu	Met	Asn	Arg	Arg	Leu	Asp	Glu	Glu	Tyr	Ser	Asn
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Leu	Asn	Phe	Ser	Glu	Asp	Leu	Tyr	Phe	Glu	Asn	Ser	Leu	Gln	Asn	Leu
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Lys	Val	Gly	Ala	Gln	Arg	Ser	Leu	Arg	Lys	Leu	Arg	Glu	Lys	Val	Asp
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Pro	Asn	Leu	Trp	Ile	Ile	Gly	Ala	Ala	Val	Val	Asn	Ala	Phe	Tyr	Ser
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Pro	Asn	Arg	Asn	Gln	Ile	Val	Phe	Pro	Ala	Gly	Ile	Leu	Gln	Pro	Pro
			580					585					590		
Phe	Phe	Ser	Lys	Glu	Gln	Pro	Gln	Ala	Leu	Asn	Phe	Gly	Gly	Ile	Gly
	595					600						605			
Met	Val	Ile	Gly	His	Glu	Ile	Thr	His	Gly	Phe	Asp	Asp	Asn	Gly	Arg
	610					615					620				
Asn	Phe	Asp	Lys	Asn	Gly	Asn	Met	Met	Asp	Trp	Trp	Ser	Asn	Phe	Ser
625					630					635					640
Thr	Gln	His	Phe	Arg	Glu	Gln	Ser	Glu	Cys	Met	Ile	Tyr	Gln	Tyr	Gly
				645					650					655	
Asn	Tyr	Ser	Trp	Asp	Leu	Ala	Asp	Glu	Gln	Asn	Val	Asn	Gly	Phe	Asn
			660					665					670		
Thr	Leu	Gly	Glu	Asn	Ile	Ala	Asp	Asn	Gly	Gly	Val	Arg	Gln	Ala	Tyr

675					680					685					
Lys	Ala	Tyr	Leu	Lys	Trp	Met	Ala	Glu	Gly	Gly	Lys	Asp	Gln	Gln	Leu
690					695					700					
Pro	Gly	Leu	Asp	Leu	Thr	His	Glu	Gln	Leu	Phe	Phe	Ile	Asn	Tyr	Ala
705					710					715					720
Gln	Val	Trp	Cys	Gly	Ser	Tyr	Arg	Pro	Glu	Phe	Ala	Ile	Gln	Ser	Ile
				725					730					735	
Lys	Thr	Asp	Val	His	Ser	Pro	Leu	Lys	Tyr	Arg	Val	Leu	Gly	Ser	Leu
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Gln	Asn	Leu	Ala	Ala	Phe	Ala	Asp	Thr	Phe	His	Cys	Ala	Arg	Gly	Thr
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gca	ggg	cag	aag	cgc	ccg	ggg	ttc	ctg	gag	ggg	ggg	ctg	ctg	ctg	ctg	96
Ala	Gly	Gln	Lys	Arg	Pro	Gly	Phe	Leu	Glu	Gly	Gly	Leu	Leu	Leu	Leu	
			20					25					30			
ctg	ctg	ctg	gtg	acc	gct	gcc	ctg	gtg	gcc	ttg	ggt	gtc	ctc	tac	gcc	144
Leu	Leu	Leu	Val	Thr	Ala	Ala	Leu	Val	Ala	Leu	Gly	Val	Leu	Tyr	Ala	
			35				40					45				
gac	cgc	aga	ggg	atc	cca	gag	gcc	caa	gag	gtg	agc	gag	gtc	tgc	acc	192
Asp	Arg	Arg	Gly	Ile	Pro	Glu	Ala	Gln	Glu	Val	Ser	Glu	Val	Cys	Thr	
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Thr	Pro	Gly	Cys	Val	Ile	Ala	Ala	Ala	Arg	Ile	Leu	Gln	Asn	Met	Asp	
	65				70				75					80		
ccg	acc	acg	gaa	ccg	tgt	gac	gac	ttc	tac	cag	ttt	gca	tgc	gga	ggc	288
Pro	Thr	Thr	Glu	Pro	Cys	Asp	Asp	Phe	Tyr	Gln	Phe	Ala	Cys	Gly	Gly	
				85				90						95		
tgg	ctg	cgg	cgc	cac	gtg	atc	cct	gag	acc	aac	tca	aga	tac	agc	atc	336
Trp	Leu	Arg	Arg	His	Val	Ile	Pro	Glu	Thr	Asn	Ser	Arg	Tyr	Ser	Ile	

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ttt	gac	gtc	ctc	cgc	gac	gag	ctg	gag	gtc	atc	ctc	aaa	gcg	gtg	ctg	384			
Phe	Asp	Val	Leu	Arg	Asp	Glu	Leu	Glu	Val	Ile	Leu	Lys	Ala	Val	Leu				
115						120						125							
gag	aat	tcg	act	gcc	aag	gac	cgg	ccg	gct	gtg	gag	aag	gcc	agg	acg	432			
Glu	Asn	Ser	Thr	Ala	Lys	Asp	Arg	Pro	Ala	Val	Glu	Lys	Ala	Arg	Thr				
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ctg	tac	cgc	tcc	tgc	atg	aac	cag	agt	gtg	ata	gag	aag	cga	ggc	tct	480			
Leu	Tyr	Arg	Ser	Cys	Met	Asn	Gln	Ser	Val	Ile	Glu	Lys	Arg	Gly	Ser				
145						150						155						160	
cag	ccc	ctg	ctg	gac	atc	ttg	gag	gtg	gtg	gga	ggc	tgg	ccg	gtg	gcg	528			
Gln	Pro	Leu	Leu	Asp	Ile	Leu	Glu	Val	Val	Gly	Gly	Trp	Pro	Val	Ala				
165						170						175							
atg	gac	agg	tgg	aac	gag	acc	gta	gga	ctc	gag	tgg	gag	ctg	gag	cgg	576			
Met	Asp	Arg	Trp	Asn	Glu	Thr	Val	Gly	Leu	Glu	Trp	Glu	Leu	Glu	Arg				
180						185						190							
cag	ctg	gcg	ctg	atg	aac	tca	cag	ttc	aac	agg	cgc	gtc	ctc	atc	gac	624			
Gln	Leu	Ala	Leu	Met	Asn	Ser	Gln	Phe	Asn	Arg	Arg	Val	Leu	Ile	Asp				
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ctc	ttc	atc	tgg	aac	gac	gac	cag	aac	tcc	agc	cgg	cac	atc	atc	tac	672			
Leu	Phe	Ile	Trp	Asn	Asp	Asp	Gln	Asn	Ser	Ser	Arg	His	Ile	Ile	Tyr				
210						215						220							
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Ile	Asp	Gln	Pro	Thr	Leu	Gly	Met	Pro	Ser	Arg	Glu	Tyr	Tyr	Phe	Asn				
225						230						235						240	
ggc	ggc	agc	aac	cgg	aag	gtg	cgg	gaa	gcc	tac	ctg	cag	ttc	atg	gtg	768			
Gly	Gly	Ser	Asn	Arg	Lys	Val	Arg	Glu	Ala	Tyr	Leu	Gln	Phe	Met	Val				
245						250						255							
tca	gtg	gcc	acg	ttg	ctg	cgg	gag	gat	gca	aac	ctg	ccc	agg	gac	agc	816			
Ser	Val	Ala	Thr	Leu	Leu	Arg	Glu	Asp	Ala	Asn	Leu	Pro	Arg	Asp	Ser				
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Cys	Leu	Val	Gln	Glu	Asp	Met	Met	Gln	Val	Leu	Glu	Leu	Glu	Thr	Gln				
275						280						285							
ctg	gcc	aag	gcc	acg	gta	ccc	cag	gag	gag	aga	cac	gac	gtc	atc	gcc	912			
Leu	Ala	Lys	Ala	Thr	Val	Pro	Gln	Glu	Glu	Arg	His	Asp	Val	Ile	Ala				
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Lys	Gly	Phe	Asn	Trp	Thr	Leu	Phe	Ile	Gln	Thr	Val	Leu	Ser	Ser	Val				

325										330					335					
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Lys Ile Lys Leu Leu Pro Asp Glu Glu Val Val Val Tyr Gly Ile Pro																				
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Tyr Leu Gln Asn Leu Glu Asn Ile Ile Asp Thr Tyr Ser Ala Arg Thr																				
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Phe Gly Thr Met Val Glu Glu Val Arg Trp Arg Glu Cys Val Gly Tyr																				
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Val Asn Ser Asn Met Glu Asn Ala Val Gly Ser Leu Tyr Val Arg Glu																				
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gcg ttc cct gga gac agc aag agc atg gtc aga gaa ctc att gac aag	1344																			
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Val Arg Thr Val Phe Val Glu Thr Leu Asp Glu Leu Gly Trp Met Asp																				
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Gln Ile Gly His Pro Asp Tyr Ile Leu Glu Glu Met Asn Arg Arg Leu																				
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Val Asn Ala Phe Tyr Ser Pro Asn Arg Asn Gln Ile Val Phe Pro Ala																				
545 550 555 560																				

ggg atc ctc cag ccc ccc ttc ttc agc aag gag cag cca cag gcc ttg	1728
Gly Ile Leu Gln Pro Pro Phe Phe Ser Lys Glu Gln Pro Gln Ala Leu	
565 570 575	
aac ttt gga ggc att ggg atg gtg atc ggg cac gag atc acg cac ggc	1776
Asn Phe Gly Gly Ile Gly Met Val Ile Gly His Glu Ile Thr His Gly	
580 585 590	
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Phe Asp Asp Asn Gly Arg Asn Phe Asp Lys Asn Gly Asn Met Met Asp	
595 600 605	
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Trp Trp Ser Asn Phe Ser Thr Gln His Phe Arg Glu Gln Ser Glu Cys	
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Met Ile Tyr Gln Tyr Gly Asn Tyr Ser Trp Asp Leu Ala Asp Glu Gln	
625 630 635 640	
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Asn Val Asn Gly Phe Asn Thr Leu Gly Glu Asn Ile Ala Asp Asn Gly	
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Gly Val Arg Gln Ala Tyr Lys Ala Tyr Leu Lys Trp Met Ala Glu Gly	
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Gly Lys Asp Gln Gln Leu Pro Gly Leu Asp Leu Thr His Glu Gln Leu	
675 680 685	
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690 695 700	
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Phe Ala Ile Gln Ser Ile Lys Thr Asp Val His Ser Pro Leu Lys Tyr	
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Arg Val Leu Gly Ser Leu Gln Asn Leu Ala Ala Phe Ala Asp Thr Phe	
725 730 735	
cac tgt gcc cgg ggc acc ccc atg cac ccc aag gag cga tgc cgc gtg	2256
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Trp	

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35 40 45

Asp Arg Arg Gly Ile Pro Glu Ala Gln Glu Val Ser Glu Val Cys Thr
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Thr Pro Gly Cys Val Ile Ala Ala Ala Arg Ile Leu Gln Asn Met Asp
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Pro Thr Thr Glu Pro Cys Asp Asp Phe Tyr Gln Phe Ala Cys Gly Gly
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Trp Leu Arg Arg His Val Ile Pro Glu Thr Asn Ser Arg Tyr Ser Ile
100 105 110

Phe Asp Val Leu Arg Asp Glu Leu Glu Val Ile Leu Lys Ala Val Leu
115 120 125

Glu Asn Ser Thr Ala Lys Asp Arg Pro Ala Val Glu Lys Ala Arg Thr
130 135 140

Leu Tyr Arg Ser Cys Met Asn Gln Ser Val Ile Glu Lys Arg Gly Ser
145 150 155 160

Gln Pro Leu Leu Asp Ile Leu Glu Val Val Gly Gly Trp Pro Val Ala
165 170 175

Met Asp Arg Trp Asn Glu Thr Val Gly Leu Glu Trp Glu Leu Glu Arg
180 185 190

Gln Leu Ala Leu Met Asn Ser Gln Phe Asn Arg Arg Val Leu Ile Asp
195 200 205

Leu Phe Ile Trp Asn Asp Asp Gln Asn Ser Ser Arg His Ile Ile Tyr
210 215 220

Ile Asp Gln Pro Thr Leu Gly Met Pro Ser Arg Glu Tyr Tyr Phe Asn
225 230 235 240

Gly Gly Ser Asn Arg Lys Val Arg Glu Ala Tyr Leu Gln Phe Met Val
245 250 255

Ser Val Ala Thr Leu Leu Arg Glu Asp Ala Asn Leu Pro Arg Asp Ser
260 265 270

Cys Leu Val Gln Glu Asp Met Met Gln Val Leu Glu Leu Glu Thr Gln
275 280 285

Leu Ala Lys Ala Thr Val Pro Gln Glu Glu Arg His Asp Val Ile Ala

290					295					300					
Leu	Tyr	His	Arg	Met	Gly	Leu	Glu	Glu	Leu	Gln	Ser	Gln	Phe	Gly	Leu
305					310					315					320
Lys	Gly	Phe	Asn	Trp	Thr	Leu	Phe	Ile	Gln	Thr	Val	Leu	Ser	Ser	Val
			325						330					335	
Lys	Ile	Lys	Leu	Leu	Pro	Asp	Glu	Glu	Val	Val	Val	Tyr	Gly	Ile	Pro
			340					345					350		
Tyr	Leu	Gln	Asn	Leu	Glu	Asn	Ile	Ile	Asp	Thr	Tyr	Ser	Ala	Arg	Thr
		355					360					365			
Ile	Gln	Asn	Tyr	Leu	Val	Trp	Arg	Leu	Val	Leu	Asp	Arg	Ile	Gly	Ser
	370					375					380				
Leu	Ser	Gln	Arg	Phe	Lys	Asp	Thr	Arg	Val	Asn	Tyr	Arg	Lys	Ala	Leu
385					390					395					400
Phe	Gly	Thr	Met	Val	Glu	Glu	Val	Arg	Trp	Arg	Glu	Cys	Val	Gly	Tyr
			405						410					415	
Val	Asn	Ser	Asn	Met	Glu	Asn	Ala	Val	Gly	Ser	Leu	Tyr	Val	Arg	Glu
			420					425					430		
Ala	Phe	Pro	Gly	Asp	Ser	Lys	Ser	Met	Val	Arg	Glu	Leu	Ile	Asp	Lys
		435					440					445			
Val	Arg	Thr	Val	Phe	Val	Glu	Thr	Leu	Asp	Glu	Leu	Gly	Trp	Met	Asp
	450					455					460				
Glu	Glu	Ser	Lys	Lys	Lys	Ala	Gln	Glu	Lys	Ala	Met	Ser	Ile	Arg	Glu
465					470					475					480
Gln	Ile	Gly	His	Pro	Asp	Tyr	Ile	Leu	Glu	Glu	Met	Asn	Arg	Arg	Leu
			485						490				495		
Asp	Glu	Glu	Tyr	Ser	Asn	Leu	Asn	Phe	Ser	Glu	Asp	Leu	Tyr	Phe	Glu
			500					505					510		
Asn	Ser	Leu	Gln	Asn	Leu	Lys	Val	Gly	Ala	Gln	Arg	Ser	Leu	Arg	Lys
		515					520					525			
Leu	Arg	Glu	Lys	Val	Asp	Pro	Asn	Leu	Trp	Ile	Ile	Gly	Ala	Ala	Val
	530					535					540				
Val	Asn	Ala	Phe	Tyr	Ser	Pro	Asn	Arg	Asn	Gln	Ile	Val	Phe	Pro	Ala
545					550					555					560
Gly	Ile	Leu	Gln	Pro	Pro	Phe	Phe	Ser	Lys	Glu	Gln	Pro	Gln	Ala	Leu
			565						570					575	
Asn	Phe	Gly	Gly	Ile	Gly	Met	Val	Ile	Gly	His	Glu	Ile	Thr	His	Gly
		580						585					590		
Phe	Asp	Asp	Asn	Gly	Arg	Asn	Phe	Asp	Lys	Asn	Gly	Asn	Met	Met	Asp

595					600					605					
Trp	Trp	Ser	Asn	Phe	Ser	Thr	Gln	His	Phe	Arg	Glu	Gln	Ser	Glu	Cys
610					615					620					
Met	Ile	Tyr	Gln	Tyr	Gly	Asn	Tyr	Ser	Trp	Asp	Leu	Ala	Asp	Glu	Gln
625					630					635					640
Asn	Val	Asn	Gly	Phe	Asn	Thr	Leu	Gly	Glu	Asn	Ile	Ala	Asp	Asn	Gly
				645					650					655	
Gly	Val	Arg	Gln	Ala	Tyr	Lys	Ala	Tyr	Leu	Lys	Trp	Met	Ala	Glu	Gly
			660					665					670		
Gly	Lys	Asp	Gln	Gln	Leu	Pro	Gly	Leu	Asp	Leu	Thr	His	Glu	Gln	Leu
		675					680					685			
Phe	Phe	Ile	Asn	Tyr	Ala	Gln	Val	Trp	Cys	Gly	Ser	Tyr	Arg	Pro	Glu
	690					695					700				
Phe	Ala	Ile	Gln	Ser	Ile	Lys	Thr	Asp	Val	His	Ser	Pro	Leu	Lys	Tyr
705					710					715					720
Arg	Val	Leu	Gly	Ser	Leu	Gln	Asn	Leu	Ala	Ala	Phe	Ala	Asp	Thr	Phe
				725					730					735	
His	Cys	Ala	Arg	Gly	Thr	Pro	Met	His	Pro	Lys	Glu	Arg	Cys	Arg	Val
			740					745					750		
Trp															